

Hearing on Environmental Innovation

**Statement of
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**Before the
Subcommittee on Energy Policy, Natural Resources, and Regulatory
Affairs
of the
Committee on Government Reform
U.S. House of Representatives**

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Good morning, Chairman Ose and Members of the Subcommittee. My name is Wayne Nastri. I was appointed Regional Administrator for the United States Environmental Protection Agency Region 9, our Pacific Southwest office in October 2001. The office covers federal environmental issues in Arizona, California, Hawaii, Nevada, and the Pacific Islands. Thank you for the opportunity to provide testimony today on new concepts in environmental policy for the 21st century. I would especially like to thank Congressman Ose for extending this invitation and look forward to working with everyone on the Subcommittee on how we can creatively address our environmental challenges in the years ahead.

In the last thirty years, we and our regulatory partners have made significant progress in protecting human health and the environment largely through setting and enforcing standards for pollutant discharges. However,



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as our environmental challenges grow more complex it seems clear that traditional approaches alone will not suffice. For example, problems such as polluted runoff from streets and farms, global climate change, and loss of habitat and biodiversity require a broader set of tools than we have relied on in the past.

Alternative Approaches for Better Environmental Results

Our Pacific Southwest office has for several years been testing alternative approaches for better environmental results with the goal of modifying our basic strategies as we find evidence of the effectiveness of new ideas to achieve environmental and public health protection faster and with lower transaction costs. Our strategy has been to focus on those environmental issues that are of great concern in the region. Our work to date falls into four broad categories: 1) voluntary programs, 2) market based approaches, 3) support of new technologies, and 4) improved systems

Voluntary Programs

Voluntary programs offer an opportunity to build partnerships in areas which may require regulation, and in pursuit of the goal of pollution prevention. Specific examples of voluntary partnerships we have supported dealing with significant environmental issues include



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Agriculture: Agriculture is an extremely important economic sector and has major impacts on public health and natural resources in the Pacific Southwest. In California we are providing technical assistance and funding to support voluntary partnerships for research and education for environmentally-friendly growing methods for more than a dozen key dairies and crops, including walnuts, citrus, rice, strawberries, apples, almonds, grapes and prunes. Much of this work has been coordinated through the University of California's Biologically Integrated Farming System projects. These projects directly involve farmers who develop, field test and educate other farmers on innovative sustainable farming systems, and commodity groups that help publicize results among the agricultural community. Most of the participating farms, orchards, and vineyards are in California's Central Valley. Working cooperatively with our industry partners, we have achieved significant results. For example, one notable accomplishment over the last year was the cultivation of 1334 acres of rice on nine demonstration farms in Butte County. These farms were successful in using 50% less toxic herbicides and 20% less nitrogen fertilizer than the county average, yet sustained no reduction in crop yields. These ongoing collaborations between growers, scientists, and EPA have benefits for everyone with a stake in farming: growers save money by using less chemicals; workers have safer



working conditions; consumers get safer food; and the overall environment is better protected.

Mining: The Pacific Southwest has the top three mineral producing states in the nation. In Nevada we are currently working with the state and four of the state's largest gold mining companies in an effort to voluntarily reduce mercury air emissions from mining operations. Mercury is a toxic pollutant that adversely affects the nervous system and data from EPA's Toxic Release Inventory indicate that mines released over 13,000 pounds per year of mercury to the atmosphere. Normally, the regulatory option for reducing air emissions from a stationary source would be to establish Maximum Achievable Control Technology emission limits for the industry. The regulatory process to develop these limits however, typically takes a long time and can impose substantial transaction costs for the agency and mining industry. We chose an alternative approach of working with the state and the mining companies to voluntarily reduce emissions to levels equivalent to or less than those that would be required by regulations. Through this program we are doing just that and anticipate that over the next three years over 50% of the mercury air emissions from these four mines will be eliminated, as well as the need for a regulatory rulemaking process.



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Comprehensive Watershed Protection: With rapid growth taking place in the Pacific Southwest, water quantity and quality issues are significant environmental issues. Our region is involved in a number of watershed protection partnership programs to address these issues at the local level. For example, our region is one of a number of partners involved in the Santa Ana River Watershed Project. This voluntary program is a successful example of shared governance - that is the strategic collaboration of local, state, and federal government and the private sector. This partnership is particularly important for the Santa Ana River Watershed since it is one of the most rapidly urbanizing areas in the country and it is home to more than 270 dairies that produce approximately one million tons of manure annually two factors that create a significant amount of stress on the watershed. The Santa Ana Watershed Project group has achieved significant progress in minimizing these impacts on the watershed. For example, the partnership has collectively secured funding to build a \$10 million 20 acre storm water detention basin that prevents flooding from the dairies and the subsequent pollution of the river. Through this voluntary program a pilot sewerage project for nine dairies has been implemented that better controls the management of manure wastes coming from the dairies.



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Medical Waste Management: Hospitals generate large amounts of wastes on a daily basis -- about 13.2 million pounds per day nationally. In California, some of this waste must be incinerated. Incineration of medical wastes results in a variety of air emissions, including dioxin, which is one of the more toxic substances known. We have partnered with hospitals in the San Francisco Bay Area, other government agencies, and community and environmental groups to launch a voluntary pollution prevention project that is lessening the amount of waste generated by local medical facilities so as to lessen the amount of air pollution. The partnership has achieved some notable results. In six Bay Area hospitals, 90 to 95% of the mercury waste has been eliminated ranging from 8-15 kilograms of mercury per hospital. Another hospital in the Bay Area identified 13 tons of plastics waste that could be diverted from incineration, by switching to recyclable containers for needles. Since waste incineration contributes to air pollution, including dioxin formation, this system can reduce the incinerator's emissions of toxic air pollutants. The partnership also identified a mopping system that reduces janitorial chemicals by 90%, conserves water, and reduces worker injuries because of its light weight and easy use. Our goal over the next year is to introduce this successful program to hospitals in southern California as well.



Environmental Management Systems: For many years, our Region has held a leadership role in promoting environmental management systems (EMSs) as a tool for achieving and moving beyond compliance. Through a number of innovative partnerships with industries and municipalities we have developed a good knowledge base about the benefits of EMSs. This experience positioned us well for our participation in the National Environmental Performance Track Program one of EPA's newest and most comprehensive beyond compliance programs.

Like other voluntary programs, Performance Track Program is successful because it builds upon the concepts of results and performance, going beyond regulations and enforcement. Instead of focusing on one aspect of environmental performance, such as waste generation or energy efficiency, the Performance Track Program asks partners to commit to the principles of EMSs for continuous improvements in multiple areas of environmental impact. For example, of the 32 partners participating in Region 9, collectively they have agreed to reduce solid waste by 8000 tons per year, lower emissions of greenhouse gases by 938 tons per year, and reduce water use by 100 million gallons per year.

Market Based Approaches

Market based approaches can be a powerful tool for achieving environmental



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improvements more efficiently. In the Pacific Southwest, air quality and watershed protection are urgent matters. We have undertaken market-based experiments aimed at speeding our progress in both these areas.

For air quality, in southern California our region has been involved with the **South Coast Air Quality Management District ("SCAQMD")** in a regional "cap and trade" program that sets caps on sulfur and nitrogen dioxide emissions but allows industries to comply by reducing their own emissions or buying "credits" from other sources that achieved extra reductions. Over the last year we have become aware of increasing concerns regarding the potential shortages of emission reduction credits for use as offsets. Working closely with the SCAQMD we are developing innovative ways to generate emission reduction credits. We are currently exploring innovative options for mobile sources, such as alternative fuel garbage trucks, delivery vehicles, and marine vessels as potential categories for emission reduction credits. In fact, our region recently approved five mobile and area source credit rules in southern California which allow these emission reduction credits to be used for new source permits. We also expect that these emission credits will help promote further use of these alternative technologies



In pursuit of our watershed protection agenda, the Administrator recently proposed a **Water Quality Trading Policy** that promotes the use of pollution reduction credits for trading in watersheds. Similar to the air “cap and trade” programs, the policy does not change any of the current regulations or standards but simply provides incentives for voluntary reductions from all sources to improve and maintain the quality of the nation’s waters. Our region will be participating in this policy through a pilot program with the Sacramento Regional Wastewater Treatment Plant and the U.S. Geological Survey that will seek to develop an offset/trading program that reduces mercury loading into the Sacramento River. We hope the success of this pilot program will soon be extended throughout the Region

Support of New Technologies

In the Pacific Southwest, we actively partner in testing new technologies -- to understand their relevance and benefits, and also to avoid any unintended negative consequences. Two interesting examples are cited in waste management and military base cleanup and closure.

Waste Management: Our region is involved in supporting the Yolo County Central Landfill in operating part of their landfill as a bioreactor. A bioreactor landfill involves a technology that uses controlled quantities of liquid to



accelerate the otherwise slow decomposition of waste. This acceleration increases the biodegradation of the solid waste and can decrease the composting time from over 30 years down to 5 to 10 years. Although the addition of liquid waste to a landfill is generally a prohibited activity under federal and state law, EPA and the state provided regulatory flexibility to operate part of the landfill as a bioreactor. Just recently the county has started its bioreactor operations and over the next five years we will be collecting data to determine whether this is a practice we want to offer to other landfills nationwide.

Base Cleanup and Closure: Another example, as part of the Superfund program our region has been part of an effort in the San Francisco bay area over the last 8 years to test various innovative technologies in the cleanup of closing military bases. This effort resulted in a number of new technology demonstrations on many of the bases including Mare Island Shipyard, Hamilton Field, and the Alameda Naval Air Station. We believe it helped to expedite the transfer of these bases to the local community for reuse and redevelopment and in the process accelerated the revitalization of local economies.

Improved Systems

Continued creativity in how we use our “established” processes to carry out



our regulatory responsibilities can be a potent source of better environmental protection. For example, our permitting programs can be daunting for industries operating in a fast moving international environment, such as electronics and computers which are significant economic sectors in our region. These plants are rapidly changing equipment and processes to meet new design specifications. Normally these changes require revisions to the facility's air permits which can take much longer to process than the manufacturer can tolerate

For example, working with **Intel's Ocotillo site in Chandler, Arizona** EPA and Maricopa county developed an air permit which sets emission limits for the entire plant rather than individual pieces of equipment and processes. This permit provides much needed operational flexibility while maintaining the same overall environmental benefits. In the development of this "test" program, Intel also developed an Internet-based information system for keeping the neighboring communities up to date on events at the plant, and designed and built an advanced wastewater treatment system — of great importance in the desert environment of Arizona.

Another example involves **Imation's Camarillo, California facility** which manufactures magnetic data storage cartridges for the computer industry. Magnetic tape manufacturing is an industry characterized by rapidly



changing technology and markets, and Imation anticipates making several modifications at the Camarillo site to expand or improve existing operations or add equipment for new products. Such modifications usually would have to be approved at the time a project is about to be undertaken by issuing a permit to construct and/or modifying the source's existing permit to operate. However, Imation was allowed to make anticipated changes without separate project-by-project permit actions by working with EPA and the State. This was accomplished by establishing alternative operating scenarios in Imation's operating permit that characterize changes and assure that, if implemented, they will meet all requirements.

Creative Approaches to Compliance Assurance

In the region's compliance assurance program, we have also tried a variety of flexible approaches to promote environmental compliance. This work has focused on compliance assistance and creative use of settlements.

Compliance Assistance

Our region has been involved in a number of multi-agency efforts to provide better environmental compliance services to various small business sectors. For example, in the mid 1990s we were part of an effort in the San Francisco Bay Area to better meet the environmental needs of small businesses. Through a series of customer need surveys, small businesses were telling us



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that they wanted an easier way to understand environmental compliance requirements, one source to go to for environmental compliance information tips on cost saving pollution prevention and resource conservation strategies, and recognition for doing the right thing. Based on these requirements, EPA, the State and local governments developed a **green business recognition program in the Bay Area**. Working with businesses, we also developed industry-specific compliance checklists which in some cases took over 50 pages of regulations from 4 or 5 regulatory agencies and condensed them into an easy to understand 10 page checklist. Results in one Bay Area county have been impressive — significant participation by auto repair facilities has produced impressive reductions in discharges of pollutants to local wastewater treatment plants. Based on the premise that the best ongoing delivery of compliance assistance is local, we have supported several state and local programs which target assistance to small businesses. For example, the **Nevada Small Business Development Center** trains and provides on-site consultations on environmental compliance to a variety of small business industries. There is a clear need for this service since last year the center trained 420 businesses and conducted 85 on-site consultations. In addition, the waste generated by these businesses was reduced by approximately



140,000 pounds and resulted in a total cost savings of \$50,000.

In cooperation with national trade associations, we recently completed a **compliance assistance program for Bay Area auto repair facilities** that ultimately translated into an estimated 720 tons of pollution reductions and savings of more than \$1 million for the participants. These type of results show that you can go green while staying in the black.

Creative Use of Settlements

In addition to seeking appropriate remedies in settling cases of non-compliance, the Region has also encouraged use of “supplemental environmental projects” (“SEPS”) as alternatives to strictly cash penalty payments. These SEPs represent on-the-ground improvements that companies must implement as part of a settlement and often help to advance a pollution reduction or prevention agenda that is of importance to the local community.

For example, last year we reached a settlement with **Torrance Mobil Corporation** that called for the facility to fund two groundbreaking environmental projects in addition to paying a penalty for numerous multi-media violations. One project involved Mobil spending \$800,000 to start a water recycling program at its Southland facility that is projected to greatly



reduce the facility's wastewater volume as well as cut back on overall water use. A second part of the SEP had the facility purchasing emergency response equipment for the Torrance Fire Department.

This is an example that demonstrates how EPA is working cooperatively to achieve the goal of environmental compliance and improved performance.

Future Directions

Let me now turn to future directions for our Pacific Southwest office.

Recently, Administrator Whitman reaffirmed EPA's commitment to finding innovative approaches to environmental protection. The Agency's strategic vision for innovation – which was developed in consultation with stakeholders inside and outside EPA – is encapsulated in a report announced by Administrator Whitman last month. Entitled “**Innovating for Better Environmental Results**”, the report lays out four core strategic goals for the Agency:

- Strengthen innovation partnerships with States and Tribes.
- Focus on priority environmental issues such as reducing greenhouse gases, reducing smog, restoring and maintaining water quality, and closing the water infrastructure gap.
- Diversify environmental protection tools and approaches, to make better use of incentives, innovative technology, environmental



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management systems, and new information tools.

- Foster a more “innovation friendly” culture within EPA.

We face significant challenges in the coming years. Experimentation requires durable partnerships, and those relationships require time.

Measurement and communication of results are vitally important, and sometimes perplexing in their implementation. Transfer of knowledge in a speedy and effective fashion is often equally difficult. *Absorbing* lessons learned into the conduct of our business is another area where we have much to learn.

Our region is committed to the goals of this strategy. We have already initiated dialogues with our state and tribal partners, on potential innovative partnership programs. For example, this year we started working with various state agencies in California to collectively agree on a number of innovative projects for addressing significant environmental issues. Our goal is to complete similar dialogues with our other state partners by the end of this year.

We are committed to innovation as a significant ingredient to achieving our goals of cleaner air, purer water, and better protected land. We will continue to improve the system and accelerate the pace of environmental progress in the years ahead. Thank you. I will be happy to answer any questions that



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you may have.

